

Lesson 4

Ranking Stands for Treatment: Choosing the Best Investment Opportunities

30 minutes

Objectives:

1. Participants will rank stands using the guidebook stand selection guidelines.
2. Participants will discuss the rationale behind the guidelines for stand selection.

Equipment Needs:

- ▲ flip chart
- ▲ Ministry of Forests video – *Pruning Second Growth Stands* (cued up at the start of Part One)
- ▲ VHS player and monitor
- ▲ overhead projector and screen
- ▲ Ministry of Forests *Pruning Guidebook*

Method:

This lesson starts with a review of the basic points for ranking stands for treatment presented in the video. The ranking criteria are compared with the principles already discussed. A case study exercise will have participants use and become familiar with the pruning ranking guidelines. Some further questions are raised by the instructor and they are discussed to ensure that the participants clearly understand the rationale for the various ranking criteria.

Video: *Review of Stand Selection Guidelines*

Facilitator: Run the tape (5 minutes). Cue at end of Part 1 (How do we prune?). Run through the Stand Selection Criteria to the Contract Administration Section.

Flip Chart: Re-visit the summary of key pruning principles on the flip chart from the previous lesson.

1. Ask the group if there are any further questions
2. Get the group to turn to their neighbor and complete the Stand Ranking Exercise.
 - ▲ Get them not to use the *Pruning Guidebook*, but instead to use what they have learned thus far for an intuitive choice. Tell them to write this down and then go to the *Pruning Guidebook* “Appendix 1” (page 23) to use the ranking guidelines to get a final determination. (Allow 20 minutes.)
3. Point out that, if there is anything they don’t understand, the *Pruning Guidebook* gives the rationale behind the *guidelines on pages 6–11*.
4. Did their intuition agree with the guidelines? How did they make their decisions – rationale? What did they learn or have reinforced by this exercise?

Key Points

- ▲ Most groups will choose stand #3 as the best investment.
- ▲ They should eliminate stand #1 based on its large diameter (mainly), lower SI, higher stand density and distance.
- ▲ They should not choose stand #2 because of the larger diameter, higher density and distance.

Note: Some may still like it due to the SI, but point out the density—the production of clear wood will drop off as crowns close.



Coastal Stand Ranking Exercise

Scenario: Which stand offers the best pruning investment opportunity?

You will have some money available in your silviculture budget over the next 5 years to do some pruning to help meet your management plan objective of achieving a range of end product values, including some high quality clear sawlogs in the next rotation. Three areas have been identified as potential pruning candidates. These are large stands. Any one of them should be able to absorb all of your pruning budget for the next five years.

Assume:

- ▲ all of the stands are 90% Douglas-fir, with minor amounts of hemlock and redcedar.
- ▲ no forest health damage is apparent in any of the stands.

Stand #1

SI ₅₀ :	22
height (m):	6.2
dbh (cm):	17
density (stems/ha):	900
distance from mill (km):	142
road condition:	minor repairs required

Stand #2

SI ₅₀ :	34
height (m):	7.1
dbh (cm):	14.3
density (stems/ha)	780
distance from mill:	89
road condition:	minor repairs required

Stand #3

SI ₅₀ :	30
height (m):	5.6
dbh (cm):	7.0
density (stems/ha)	520
distance from mill:	42
road condition:	good road

Interior Stand Ranking Exercise

Scenario: Which stand offers the best pruning investment opportunity?

You will have some incremental money available in your silviculture budget over the next 5 years to do some pruning to help meet your management plan objective of achieving a range of end product values, including some high quality clear sawlogs in the next rotation. Three areas have been identified as potential pruning candidates. These are large stands. Any one of them should be able to absorb all of your pruning budget for the next five years.

Assume:

- ▲ all of the stands are 90% lodgepole, with minor amounts of Douglas-fir and spruce.
- ▲ no forest health damage is apparent in any of the stands.

Stand #1

SI ₅₀ :	21
height (m):	7.5
dbh (cm):	14
density (stems/ha)	650
distance from mill:	142
road condition:	minor repairs required

Stand #2

SI ₅₀ :	26
height (m):	8.1
dbh (cm):	12.3
density (stems/ha)	1100
distance from mill:	89
road condition:	minor repairs required

Stand #3

SI ₅₀ :	23
height (m):	6.5
dbh (cm):	7.8
density (stems/ha)	900
distance from mill:	42
road condition:	good road

Flip Chart: Additional Questions

Turn to the [Appendix #1 on page 23](#).

Species Questions:

Coast:

- ▲ Why would true firs be ranked lower?

Due to the potential epicormic branching from true firs and the associated loss of quality from pin-knots.

- ▲ Why is forest health such a big concern? Just 5% of an agent puts the stand into a rank 2 category.

The good candidates for pruning are usually open stands (stands just below full site occupancy). Even small percentage losses to forest health agents is significant, and pruning is a very expensive treatment.

- ▲ Is there a difference between pests? What if you had 5–10% *Phellinus* in the stand?

Phellinus is a big concern because of its potential for spread and again the very high investment required for pruning. Some other pests (needle blights or casts) may just slow down growth for a year or two.

Blister rust on 5–10% of the white pine component in your mixed white pine and Douglas-fir plantation.

Interior:

- ▲ Why would Douglas-fir and larch be ranked lower than lodgepole pine?

The main reason is there is enough pine on good sites that we could exhaust our pruning dollars without going to other species. Also, there is a potential for epicormic branching, and the associated loss of quality from pin-knots, from fir although it is more of a problem with larch.

- ▲ Why would hemlock be ranked even lower?

Again, lodgepole pine will meet the dollars available in the pruning budget for years to come. Also, you will want to prune the highest value species first.

Or, gall rust can easily be dealt with by pruning since the infected branches are just cut off. If the stand was recently spaced, there shouldn't be many trees with fatal galls (<10 cm from the main stem).

